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09/532,894	03/22/2000	Masataka Mitama	11P083162	8017

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EXAMINER

NGUYEN, THUAN T

ART UNIT	PAPER NUMBER
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2685

DATE MAILED: 08/12/2004

12

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/532,894

**Applicant(s)**

MITAMA, MASATAKA

**Examiner**

THUAN T. NGUYEN

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### ***Response to After Final Request for Reconsideration***

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

4. Claims 1-4, 6-12, and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. (U.S. Patent No. 5,465,404/ or "Thompson" hereinafter) in view of Buhrmann et al. (U.S. Patent No. 5,854,984).

Regarding claims 1, 16, 18 and 20, Thompson discloses a software portable telephone set (Fig. 5 and col. 9/lines 13-30 for a detachable module 100 containing software applications) comprising a detachable transmitting function part (Fig. 10 with a transceiver 104 within a detachable module 100 for providing transmitting function) and transmitting and receiving circuits capable of being reconfigured afresh with software program updating, wherein the transmission circuit is reconfigured afresh in relation to the mounting and demounting of said transmitting function part, i.e., the detachable module 100 comprises transmitting and receiving circuits (as illustrated in Fig. 10 with a transmitter and a receiver; and in Fig. 8 with a wireless radio communication 90 with antenna 92) can be removed or inserted into the body of the

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cellular phone 50 and by the mounting and demounting of a transmitting function part, software can be updated accordingly to a transmission system, for instance, to cope with different communication systems (see col. 3/line 52 to col. 4/line 23).

Thompson does not further address the step of wherein said detachable transmitting function part "conditions a transmission frequency signal received from said transmitting circuit"; however, Buhrmann teaches a same technique that a mobile station includes a detachable transmitting part (Fig. 1 with pager 5 -with a transmitter 110- is a detachable transmitting part), and in a closer look at Figure 4 with detailed components of the detachable transmitting part, the transmitter 110 conditions the transmission frequency signal with the use of a frequency synthesizer 120 (col. 6/line 49 to col. 7/line 33 as the transmission signal is being modulated, amplified by the transmitter 110 before the transmission occurs). Buhrmann further discloses to use software for program controlled or program updated as the DSP 130 can be incorporated into controller 140 as either circuitry or software (col. 5/lines 43-59). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Thompson's system with Buhrmann's disclosed technique in order to provide a convenient software portable telephone set that can condition a transmission frequency signal with the detachable transmitting part as taught by Buhrmann for flexible application into other different portable devices (col. 7/lines 50-62). This is also served as a motivation for having a detachable transmitting part within the portable communication device.

Regarding claims 2 and 4, in further view of claim 1 above, Buhrmann further discloses wherein the transmitting function is provided by a detachable module for transmitting "a modulated output analog signal" and comprise one of "a demodulator" or "a modulator" (only one limitation is considered to be claimed) and a baseband signal processing portion (see Buhrmann, col. 6/line 36 to col. 7/line 33 for modulating/demodulating technique and baseband signal processing addressed).

As for claim 3, in further view of claim 1 above, Thompson further discloses "wherein the transmitting and receiving circuits comprise a software memory part for executing signal conversion processing, programs transferred from a program memory being set in the software memory part", i.e., a resident memory 84 or 284 (same function in both Figs. 7 & 8) contains resident applications and core software programs within communication device 50 (col. 9/lines 30-48 & col. 10/lines 13-25) for executing signal conversion processing, as to handle complex digital information via a modem communication between processor 80 and external sources (col. 10/lines 26-43) as well as handling the encoding or decoding information between processor 80 and resident memory 84 via bus 64 (col. 9/lines 37-48), and programs transferred is addressed in the memory upload and download from application modules 100 and utility programs for operation the processor 80 and the digital signal processor DSP 76 (col. 10/lines 55-65).

As for claim 6, in further view of claim 1 above, Thompson discloses "wherein the transmitting and receiving circuits comprise a software memory part for executing signal conversion processing, programs transferred from a program memory being set in the software memory part and a plurality of programs for commanding signal conversion processing are stored in the program memory", i.e., a resident memory 84 or 284 (same function in both Figs. 7 & 8) contains resident applications and core software programs within communication device 50 (col. 9/lines 30-48 & col. 10/lines 13-25) for executing signal conversion processing, as to handle complex digital information via a modem communication between processor 80 and external sources (col. 10/lines 26-43) as well as handling the encoding or decoding information between processor 80 and resident memory 84 via bus 64 (col. 9/lines 37-48), and programs transferred from a program memory (Fig. 8/item 184) is addressed in the memory upload and download from application modules 100 and utility programs for operation the processor 80 and the digital signal processor DSP 76 (col. 10/lines 55-65) and a plurality of programs for

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commanding signal conversion processing are stored in the program memory (Fig. 10, and col. 14/line 45 to col. 15/line 47 for examples of programs stored in program memory 184 for signal conversion processing to different applications).

As for claim 7, in further view of claim 1 above, Thompson discloses "wherein the transmitting and receiving circuits comprise a software memory part for executing signal conversion processing, programs transferred from a program memory being set in the software memory part and the software memory provides commands according to a program transferred from the program memory according to a system switching command", i.e., a resident memory 84 or 284 (same function in both Figs. 7 & 8) contains resident applications and core software programs within communication device 50 (col. 9/lines 30-48 & col. 10/lines 13-25) for executing signal conversion processing, as to handle complex digital information via a modem communication between processor 80 and external sources (col. 10/lines 26-43) as well as handling the encoding or decoding information between processor 80 and resident memory 84 via bus 64 (col. 9/lines 37-48), and programs transferred from a program memory (Fig. 8/item 184) is addressed in the memory upload and download from application modules 100 and utility programs for operation the processor 80 and the digital signal processor DSP 76 (col. 10/lines 55-65); and Thompson inherently teaches the software memory provides commands according to a program transferred from the software source memory according to a system switching command because different networks provides different protocols are under the control or command of the system facility 22 for switching or change systems, for instance, different modules contains different software source memory according to that system for the portable set to cope with either a PBX system or a wireless cellular system (Fig. 1, col. 16/lines 23-35 and col. 17/line 63 to col. 18/line 17).

Regarding claim 8, Thompson discloses "a portable telephone set comprising: a body, a transmitting circuit within said body; and a transmission function unit for performing a specified

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transmission process and being detachably mounted to said body of the portable telephone set, wherein an operation of the transmission function unit is determined on the basis of a predetermined software program which is selected", i.e., a portable telephone set (Fig. 5 and col. 9/lines 13-30 for a detachable module 100 containing software applications) comprising a detachable transmitting function part and a receive function unit (as illustrated in Fig. 10 with a transmitter and a receiver; and in Fig. 8 with a wireless radio communication 90 with antenna 92) can be removed or inserted into the body of the cellular phone 50 and by the mounting and demounting of a transmitting function part, software can be updated accordingly to a transmission system, for instance, to cope with different communication systems (see col. 3/line 52 to col. 4/line 23).

Thompson does not further address the step of wherein said transmitting function unit "conditions a transmission frequency signal received from said transmitting circuit"; however, Burhrmann teaches a same technique that a mobile station includes a detachable transmitting part (Fig. 1 with pager 5 -with a transmitter 110- is a detachable transmitting part), and in a closer look at Figure 4 with detailed components of the detachable transmitting part, the transmitter 110 conditions the transmission frequency signal with the use of a frequency synthesizer 120 (col. 6/line 49 to col. 7/line 33 as the transmission signal is being modulated, amplified by the transmitter 110 before the transmission occurs). Buhrmann further discloses to use software for program controlled or program updated as the DSP 130 can be incorporated into controller 140 as either circuitry or software (col. 5/lines 43-59). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Thompson's system with Buhrmann's disclosed technique in order to provide a convenient software portable telephone set that can condition a transmission frequency signal with the detachable transmitting part as taught by Buhrmann for flexible application into other different

portable devices (col. 7/lines 50-62). This is also served as a motivation for having a detachable transmitting part within the portable communication device.

As for claim 9, in further view of claim 8 above, Thompson further discloses "wherein the predetermined software program is selected from a plurality of software programs stored in a memory in the portable telephone set", i.e., a resident memory in the portable set contains a plurality of predetermined application software and programs (Fig. 7/item 84 or Fig. 8/item 284, and col. 10/lines 23-65).

Regarding claim 10, in further view of claim 8 above, Buhrmann further discloses wherein the transmitting function is provided by a detachable module for transmitting "a modulated output analog signal" and comprise one of "a demodulator" or "a modulator" (only one limitation is considered to be claimed) and a baseband signal processing portion (see Buhrmann, col. 6/line 36 to col. 7/line 33 for modulating/demodulating technique and baseband signal processing addressed).

As for claim 11, in further view of claim 8 above, Thompson discloses "wherein said transmission function unit comprises one of a plurality of transmission function units each performing a different frequency band operation", i.e., different frequency band operation is programmed in different application modules containing transmission function units, for instance, to cope with a PBX communication system or to a cellular communication system (col. 15/line 15 to col. 16/line 35 for different portions of frequency spectrum are used for different systems and protocols).

As for claim 12 and 15, in further view of claim 9 above, Thompson discloses "comprising a receive processing unit" (Fig. 10/item 104), "wherein the plurality of software programs are stored in a software source memory, one of the plurality of software programs is selected and down-loaded and an operation of the receive processing unit is defined by the down-loaded software program", i.e., Thompson teaches that a plurality of software programs



are stored in a software source memory or a program memory 184 and one of them is selected and downloaded to a resident memory 84 or 284 and then the operation of the receive processing unit is performed based on the downloaded software or the application program accordingly (col. 14/line 45 to col. 15/line 14).

As for claim 14, in further view of claim 8 above, Thompson discloses "wherein the transmission function unit comprises a software memory for storing one of a plurality of software programs each adapted to each transmission function unit, the predetermined software program being defined by loading the software program from the software memory in the mounted transmission function unit", i.e., Thompson teaches that a plurality of software programs are stored in a software source memory or a program memory 184 and one of them is selected and downloaded to a resident memory 84 or 284 and then the operation of the receive processing unit is performed based on the defined downloaded software or the application program accordingly (col. 14/line 45 to col. 15/line 14).

As for claims 17 and 19, Buhrmann further inherently addresses to include "a wide-band transmitting circuit" within the portable telephone set (col. 5/lines 10-32 as more than 3 bands for communication can be applied for communicating to additional telephone services).

5. Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. (U.S. Patent No. 5,465,401) in view of Buhrmann as in claims 1 and 8 above, and in view of Crnkovic et al. (U.S. Patent No. 5,815,805).

Regarding claims 5 and 13, in further view of claims 1 and 8, Thompson disclose a detachable module 100 comprising a transceiver 104, but Thompson does not further disclose "wherein the detachable module comprises one of a power amplifier, a transmission signal filter and an isolator" and "wherein the transmission function unit includes an amplifier, a transmission signal filter and an isolator"; however, in a transmitting section of a portable telephone set, the transmitting section is known to include a power amplifier, a transmission

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signal filter and an isolator. In fact, Crnkovic teaches a same technique to include a power amplifier 113, a transmission signal filter 112 and an isolator 115 in transmitter section 101 (Fig. 1, and col. 7/line 63 to col. 8/line 14 as attenuator 115 is a TDK isolator). Therefore, it would have been obvious to modify Thompson's transceiver circuit with Crnkovic's detailed components of a transmitter section comprising one of a power amplifier, a transmission signal filter and an isolator within the detachable module as means for matching or replacing appropriate transmitting section parts accordingly due to power adjustments to different transmission systems as suggested by Crnkovic with the benefits of comprising one of a transmit filter, a power amplifier and an isolator or attenuator (col. 1/lines 25-50, col. 6/line 66 to col. 7/line 35 , and col. 7/line 63 to col. 8/line 14).

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

King (US Patent 6,556,681 B2) discloses a trainable transmitter.

Makhlouf (US Patent 6,292,172 B1) and Hillenmayer (US Patent 5,719,936) disclose systems related to detachable transmitting part.

7. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9306, (for Technology Center 2600 only)**

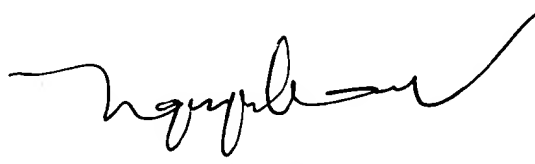
*Hand-delivered responses should be brought to Crystal Park II,  
2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).*

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (703) 308-5860. The examiner can normally be reached on Monday-Friday from 9:00 AM to 6:00 PM, with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.



**TONY T. NGUYEN**  
**PATENT EXAMINER** *TSB*

Tony T. Nguyen  
Art Unit 2685  
August 5, 2004